



Indoor Air Quality



Fact Sheet: MOLD IN SCHOOLS

Tools for Schools

When mold grows in school buildings and portable classrooms, some staff and students, particularly those with allergies or respiratory problems, may report adverse health effects.

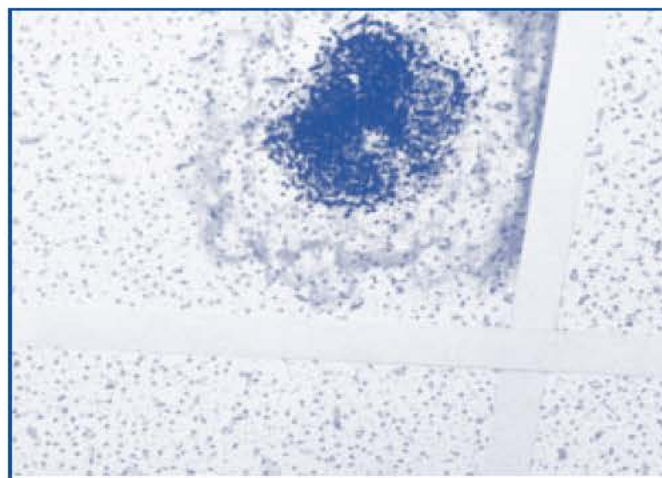
Mold requires oxygen, water, and a source of food to grow. There are molds that can grow on almost anything including: wood, paper, carpet, foods, and insulation. Controlling moisture is the key to managing mold in schools.

Why is Mold Growing in Your School?

- Mold grows in schools when airborne mold spores land on a damp “food source” and begin digesting it in order to survive.
- The water required for mold growth can enter school buildings and portable classrooms through leaky roofs, pipes, windows, foundations, and other structural openings. Water may also enter schools due to floods, poor drainage, or mis-directed sprinklers.
- Moisture problems in schools can result from scheduled maintenance activities or conditions during school breaks such as:
 - Increased moisture due to painting or carpet cleaning;
 - High humidity during the summer; and
 - No air conditioning or heating system operation (or reduced use) when school is not in session.
- When moisture enters the building and its interior structure, it can condense as it comes into contact with cooler indoor surfaces, such as windows, walls, and water pipes.

Where Does Mold Grow in Schools?

- Mold growth often results from excess moisture or water build-up in the following areas:



Photos above: mold growing on the surface of a unit ventilator and a ceiling tile.

- On roof materials above ceilings;
- Around windows;
- Near water fountains;
- On walls, ceiling tiles, and other visible surfaces;
- On hidden surfaces, such as the back side of dry wall or wall coverings;
- Around bathroom tiles;
- In cooling coil drip pans and inside ductwork; and
- In books and carpet.



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What Health Effects are Associated with Mold?

- Potential health effects associated with mold exposure may include irritation of the eyes, skin, nose, throat, and lungs of both mold allergic and non-allergic people.
- In sensitive individuals allergic reactions can be caused by breathing in or touching mold.
- Dead mold may still cause allergic reactions in some people, so it is not enough to simply kill the mold and leave it there, the mold must be removed.

How Can You Manage Mold in Schools?

- The key to controlling indoor mold growth in schools is to control moisture.
- Conduct maintenance as scheduled and perform regular school building inspections for signs of mold, moisture, and leaks.
- Report all water leaks and moisture problems immediately to your maintenance staff.
- Clean and dry damp or wet building materials and furnishings within 24–48 hours after a leak or spill to prevent mold growth.
- Keep indoor relative humidity between 30% and 50%:
 - Ventilate bathrooms, locker rooms, and other moisture-generating sources to the outside.
 - Use air conditioners and dehumidifiers.
- Scrub mold off hard surfaces with water and detergent, and dry completely.
- Remove and replace porous materials, such as ceiling tiles or carpet, that become moldy.
- Avoid installing carpet in areas with perpetual moisture problems:
 - Near drinking fountains and classroom sinks.
 - On concrete floors in contact with the ground and subject to frequent condensation.



photo by Daniel Friedman

Photo above: mold growing on backside of wallboard.

- Cover cold surfaces, such as cold water pipes, with insulation.
- Ensure that the school operates exhaust systems, such as bathroom fans, together with air conditioning or heating systems.
- Establish policies that restrict moisture generating activities, such as carpet cleaning, during vacation unless moisture removing equipment is operating. Consider cycling the air conditioning system several hours every day or running portable dehumidifiers.
- Participate in U.S. EPA's *IAQ Tools for Schools* Program. This program provides guidance on good maintenance practices that help prevent mold growth and other IAQ problems.

Additional Resources

You can find more information on mold-related issues and moisture prevention in the following EPA documents:

- *Mold Remediation in Schools and Commercial Buildings*
www.epa.gov/mold/mold_remediation.html
- *A Brief Guide to Mold, Moisture and Your Home*
www.epa.gov/mold/moldguide.html
- *the IAQ Tools for Schools Action Kit*
www.epa.gov/iaq/schools/actionkit.html
- *Managing Asthma in the School Environment*
www.epa.gov/iaq/schools/asthma.html